

REMARKS

Reconsideration of this application is requested. Claims 38, 40-43, 47-58 and 75-82 are in the case. All claims deleted by way of this response have been canceled without prejudice to the possibility of filing a continuing application directed to that subject matter.

I. THE 35 U.S.C. § 112, FIRST PARAGRAPH, REJECTION

Claims 38-58 stand rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was allegedly not described in the specification in such a way as to reasonable to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention. In response, and without conceding to the merit of this rejection, claim 38 has been amended to incorporate the subject matter of claim 39 and to further improve the form of the claim. Claim 39 has been canceled without prejudice.

The Examiner goes on to state that the specification disclosure does not sufficiently teach the method of synthesis using a porous device and further states that the specification description is directed to a method of using a porous device in an "assay method...". Furthermore, the Examiner states that the specification examples are drawn to methods of functionalizing resin and that the specification does not teach any method of synthesis using a porous device. The rejection is respectfully traversed.

Page 32 of the application describes the preparation of porous plugs 2. The plugs may incorporate functionalized resins of the type described in the table bridging pages 33 and 34. These are known resins which are used in solid supported synthesis.

As stated at page 34, line 2, the plugs "can be used in any situation where the functionalised resin may be used since the plugs are both physically and chemically stable and the functionalised resin can be accessed by reagents". It is clear, therefore, that a skilled person, familiar with the known functionalized resins, is instructed to make plugs incorporating such resins and is instructed that the plugs can be used in the same way that the resins themselves can be used.

Nevertheless, as proof of the statements made on page 34, line 4 onwards, the specification includes various examples illustrating that the plugs can be used in a range of synthetic methods. Examples 1 and 2 in the specification show that the plugs are stable in situations encountered during chemical reactions, for example boiling in solvents and centrifugation. Examples 3 and 4 describe a range of reactions that can be undertaken using the plugs. Examples 5 to 7 show how other solid supported reactions can be undertaken on the plugs. Examples 8 and 9 describe the preparation of peptides. Examples 10 and 11 show that certain other reactions such as the Suzuki and the Mitsunobu reactions can be undertaken on the plugs. Subsequent examples show that oxidation and reduction reactions can be carried out on the plugs and polypeptides can be prepared on the plugs. Examples 17 to 19 show how libraries of compounds can be prepared using the plugs.

Thus, the specification discloses that a wide range of reactions can be carried out on the plugs, and illustrates the fact that the plugs can be used in situations where the resin alone was previously used. This is surprising, given the fact that the resin is encapsulated within the plug. Nonetheless, there are very significant advantages which

result from incorporating known resins into plug form, for example since manipulating a mass of powdered resin is avoided.

The Examiner appears to regard the examples as simply showing how the resin can be functionalized, rather than appreciating that the examples show how compounds can be constructed on the resin and then cleaved therefrom. As mentioned above, Examples 17 to 19 show the preparation of libraries of compounds, and there is a clear description of cleavage of products from the resins.

In light of the above, it is clear that the inventor had possession of the claimed invention as of the filing date of the application. Withdrawal of the outstanding 35 U.S.C. § 112, first paragraph, rejection is respectfully requested.

II. THE 35 U.S.C. § 112, SECOND PARAGRAPH REJECTION

Claims 38-58 stand rejected under 35 U.S.C. § 112, second paragraph, for the reasons detailed on page 5 of the Action. In response, and without conceding to the merit of these rejections, the claims have been amended to deal with the Examiner's formal points. Withdrawal of the outstanding 35 U.S.C. § 112, second paragraph, rejection is respectfully requested.

III. THE ANTICIPATION REJECTIONS

Claims 38-56 and 58 stand rejected under 35 U.S.C. § 102(a) as allegedly anticipated by WO 98/41534 (Biosepra). That rejection is respectfully traversed.

Biosepra discloses porous ceramic particles which are filled with a gel which is polymerized *in situ*. However, Biosepra does not disclose a porous device wherein a

multiplicity of particles of an active material are entrapped and held in position by a physical weld (basis for "physical weld" appears at page 12, line 6 of the specification). This physical weld results from the sintering process which is used in preferred embodiments of the present invention. During the sintering, there is a softening of the inert material which causes fusion of particles thereof, thereby forming a network which then holds the active material in position.

This is to be contrasted with Biosepra which starts with a porous ceramic having performed pores and then fills the pores. Biosepra does not disclose anything akin to a weld. Further, Biosepra does not disclose entrapped particles.

In light of the above it is clear that Biosepra does not anticipate the presently claimed invention. Withdrawal of the anticipation rejection based on Biosepra is respectfully requested.

By way of observation, Biosepra does render the presently claimed invention unpatentable. The Biosepra device is manufactured by a completely different process compared to the process with which the present invention is concerned. Biosepra could not be modified to provide a process in accordance with the present invention. Claim 75 is distinguished over Biosepra on the basis that it describes an inert material which is a thermoplastic, and this is not disclosed in Biosepra. Furthermore, Biosepra does not disclose the provision of a multiplicity of particles of active material as described above.

Clearly, therefore, a skilled person would not have been motivated to attempt to modify Biosepra to produce a porous device of the type described in the claims of the present application. The claims of the present application are thus patentably distinguished from Biosepra.

Claims 38, 42, 44, 46-48 and 50-54 stand rejected under 35 U.S.C. § 102(b) as allegedly anticipated by U.S. Patent 4,218,363 to Rohrbach et al. That rejection is respectfully traversed.

Rohrbach describes an inorganic support, for example of alumina, which is treated with a pre-polymerised compound dissolved in a solvent so that the polymeric compound is deposited upon the inorganic support. The solvent is then removed to leave the pre-polymerized compound on the inorganic support. Rohrbach does not describe the provision of a weld of the type described in amended claim 38. Withdrawal of the outstanding anticipation rejection based on Rohrbach is now believed to be in order, and is requested.

Moreover, the method of manufacturing the device according to Rohrbach is very different to the method according to the present invention, and the product which results is also structurally very different. There would have been no motivation for a skilled person to modify Rohrbach and arrive at the subject matter of the present invention. Thus, the invention as claimed is not rendered obvious by Rohrbach. Furthermore, the subject matter of proposed new claim 75 referred to above is also novel and non-obvious over Rohrbach. In this regard, Rohrbach does not disclose an inert material which is a thermoplastic and a multiplicity of particles of active material of the type described in claim 75.

Claims 38-58 stand rejected under 35 U.S.C. § 102(e) as allegedly anticipated by U.S. Patent 6,153,375 to Kobylecki et al. That rejection is respectfully traversed.

While Kobylecki and the present application have common inventorship, the inventions are distinct. The cited document describes a layer of resin sandwiched

between two layers of a porous inert lamina material. The cited document does not describe an active material which is entrapped within a porous internal region, in contrast to the present invention as described in claim 38. Furthermore, the cited document does not describe particles of active material being held in position by a physical weld. It should be appreciated that the methods of constructing the respective devices according to the present invention and in the cited document are substantially different and the devices which result are also clearly distinct one from the other.

Withdrawal of the outstanding anticipation rejection based on Kobylecki et al is now believed to be in order and is requested.

Independent claim 75 is also novel and patentably distinguished from U.S. Patent 6,153,375, since the cited document does not describe the provision of a multiplicity of particles of active material entrapped within an internal region in pores of a porous support means. Furthermore, claim 75 excludes the use of fabric material, filamentous material or fibrous materials which are the only types of materials described in U.S. Patent 6,153,375. Thus, it is clear that claim 75 is patentably distinguished from the cited art.

Withdrawal of the prior rejections is now believed to be in order. Such action is respectfully requested.

IV. INFORMALITIES TO THE DRAWINGS

The informalities to the drawings have been noted. Corrected formal drawings are being submitted simultaneously herewith. Entry of those drawings is respectfully requested.

KOBYLECKI
Serial No. 09/807,504
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V. THE SPECIFICATION

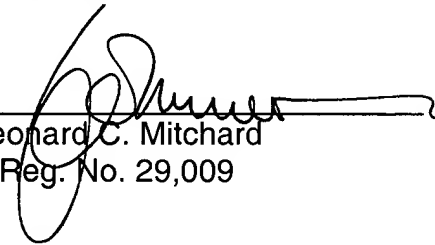
An Abstract is presented on a separate sheet attached to this response. In addition, the specification has been amended to include customary headings, including a brief description of the drawings. No new matter is entered.

Allowance of the application is awaited.

Respectfully submitted,

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ABSTRACT OF THE DISCLOSURE

 A porous device for use in a method of synthesis comprising a body having an internal region which is porous wherein an active material for example a solid support resin, is entrapped within the internal region.
